

## Complete Summary

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### GUIDELINE TITLE

Infectious Diseases Society of America guidelines for the diagnosis and treatment of asymptomatic bacteriuria in adults.

### BIBLIOGRAPHIC SOURCE(S)

Nicolle LE, Bradley S, Colgan R, Rice JC, Schaeffer A, Hooton TM. Infectious Diseases Society of America guidelines for the diagnosis and treatment of asymptomatic bacteriuria in adults. Clin Infect Dis 2005 Mar 1;40(5):643-54. [118 references] [PubMed](#)

### GUIDELINE STATUS

This is the current release of the guideline.

## COMPLETE SUMMARY CONTENT

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## SCOPE

### DISEASE/CONDITION(S)

Asymptomatic bacteriuria

Note: Recommendations are relevant only for the treatment of asymptomatic bacteriuria and do not address prophylaxis for prevention of symptomatic or asymptomatic urinary infection.

### GUIDELINE CATEGORY

Diagnosis  
 Management  
 Treatment

## CLINICAL SPECIALTY

Family Practice  
Geriatrics  
Infectious Diseases  
Internal Medicine  
Obstetrics and Gynecology  
Urology

## INTENDED USERS

Physicians

## GUIDELINE OBJECTIVE(S)

To provide recommendations for diagnosis and treatment of asymptomatic bacteriuria in adult populations >18 years of age

## TARGET POPULATION

Adult patients >18 years of age with asymptomatic bacteriuria

Special populations considered include:

- Premenopausal, nonpregnant women
- Pregnant women
- Diabetic women
- Older persons residing in the community
- Elderly institutionalized subjects
- Subjects with spinal cord injuries
- Patients with indwelling urethral catheters (both short-term and long-term catheters considered)
- Patients undergoing urologic interventions
- Immunocompromised patients and organ transplant patients

## INTERVENTIONS AND PRACTICES CONSIDERED

### Diagnosis/Screening

1. Screening of special populations for asymptomatic bacteriuria
2. Collection of urine specimens to minimize contamination
3. Urine culture

### Treatment

1. Nitrofurantoin
2. Sulfonamides
3. Mandelamine
4. Ampicillin
5. Nalidixic acid
6. Tetracycline

7. Cefaclor
8. Trimethoprim
9. Norfloxacin
10. Cephalexin

## MAJOR OUTCOMES CONSIDERED

- Symptomatic urinary infection
- Bacteremia with sepsis
- Worsening functional status
- Progression to chronic kidney disease or hypertension
- Development of urinary tract cancer
- Decreased duration of survival
- Subsequent antimicrobial resistance
- Adverse drug effects
- Cost factors
- Mortality
- Progression to diabetic complications (i.e., nephropathy)
- Incidence of fever

## METHODOLOGY

### METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)  
 Hand-searches of Published Literature (Secondary Sources)  
 Searches of Electronic Databases

### DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

#### Literature Review

The recommendations in this guideline were developed after a review of studies published in English. These were identified through a search of the PubMed database supplemented by review of references of relevant papers to identify additional reports, particularly early studies not accessed through the PubMed search. In addition, experts in urinary infection were asked to identify any additional trials not accessed through review. Clinical studies include prospective, randomized clinical trials; prospective cohort studies; case-control studies; and other descriptive studies. When appropriate, the methodological rigor of studies was evaluated using accepted criteria (e.g., the CONSORT statement). Studies were excluded if the study population was not adequately characterized to assess generalizability, if procedures for patient follow-up or exclusions may have introduced sufficient bias to limit the credibility of observations, or if there were insufficient numbers of patients enrolled to support valid statistical analysis.

### NUMBER OF SOURCE DOCUMENTS

Not stated

## METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

### RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Quality of Evidence

- I. Evidence from  $\geq 1$  properly randomized, controlled trial
- II. Evidence from  $\geq 1$  well-designed clinical trial, without randomization; from cohort or case-controlled analytic studies (preferably from  $>1$  center); from multiple time-series; or from dramatic results from uncontrolled experiments
- III. Evidence from opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees

### METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses  
Systematic Review with Evidence Tables

### DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

### METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

### DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

### RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Strength of Recommendation

- A. Good evidence to support a recommendation for use; should always be offered
- B. Moderate evidence to support a recommendation for use; should generally be offered
- C. Poor evidence to support a recommendation; optional
- D. Moderate evidence to support a recommendation against use; should generally not be offered
- E. Good evidence to support a recommendation against use; should never be offered

### COST ANALYSIS

## Pregnant Women

An American cost evaluation from the viewpoint of the outcome of pyelonephritis concluded that a single screening culture in the first trimester was cost-effective if the prevalence of bacteriuria was >2% and the risk of pyelonephritis in bacteriuric women was >13%.

## METHOD OF GUIDELINE VALIDATION

External Peer Review  
Internal Peer Review

## DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Respected peers - those who are not members of the guideline panel but who are experts in the same field - reviewed the guidelines for scientific validity. These outside reviewers are acknowledged at the end of the original guideline document. Guidelines were also reviewed by the Infectious Diseases Society of America (IDSA) Practice Guidelines Committee for content and format. The guideline group submitted its final draft to the Practice Guidelines Committee for approval. After approval was granted, the draft was forwarded to the IDSA Governing Council for final approval and then to Clinical Infectious Diseases for publication.

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

The strength of recommendation (A-E) and quality of evidence (I-III) are defined at the end of the "Major Recommendations" field.

Note: Recommendations are relevant only for the treatment of asymptomatic bacteriuria and do not address prophylaxis or prevention of symptomatic or asymptomatic urinary infection.

1. The diagnosis of asymptomatic bacteriuria should be based on results of culture of a urine specimen collected in a manner that minimizes contamination (A-II).
  - For asymptomatic women, bacteriuria is defined as 2 consecutive voided urine specimens with isolation of the same bacterial strain in quantitative counts  $\geq 10^5$  colony forming units (cfu)/mL (B-II).
  - A single, clean-catch voided urine specimen with 1 bacterial species isolated in a quantitative count  $\geq 10^5$  cfu/mL identifies bacteriuria in men (B-III).
  - A single catheterized urine specimen with 1 bacterial species isolated in a quantitative count  $\geq 10^2$  cfu/mL identifies bacteriuria in women or men (A-II).
2. Pyuria accompanying asymptomatic bacteriuria is not an indication for antimicrobial treatment (A-II).
3. Pregnant women should be screened for bacteriuria by urine culture at least once in early pregnancy, and they should be treated if the results are positive (A-I).

- The duration of antimicrobial therapy should be 3-7 days (A-II).
  - Periodic screening for recurrent bacteriuria should be undertaken following therapy (A-III).
  - No recommendation can be made for or against repeated screening of culture-negative women in later pregnancy.
4. Screening for and treatment of asymptomatic bacteriuria before transurethral resection of the prostate is recommended (A-I).
    - An assessment for the presence of bacteriuria should be obtained, so that results will be available to direct antimicrobial therapy prior to the procedure (A-III).
    - Antimicrobial therapy should be initiated shortly before the procedure (A-II).
    - Antimicrobial therapy should not be continued after the procedure, unless an indwelling catheter remains in place (B-II).
  5. Screening for and treatment of asymptomatic bacteriuria is recommended before other urologic procedures for which mucosal bleeding is anticipated (A-III).
  6. Screening for or treatment of asymptomatic bacteriuria is not recommended for the following persons.
    - Premenopausal, nonpregnant women (A-I)
    - Diabetic women (A-I)
    - Older persons living in the community (A-II)
    - Elderly, institutionalized subjects (A-I)
    - Persons with spinal cord injury (A-II)
    - Catheterized patients while the catheter remains in situ (A-I)
  7. Antimicrobial treatment of asymptomatic women with catheter-acquired bacteriuria that persists 48 hours after indwelling catheter removal may be considered (B-I).
  8. No recommendation can be made for screening for or treatment of asymptomatic bacteriuria in renal transplant or other solid organ transplant recipients (C-III).

#### Definitions:

#### Quality of Evidence

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#### Strength of Recommendation

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- C. Poor evidence to support a recommendation; optional
- D. Moderate evidence to support a recommendation against use; should generally not be offered

- E. Good evidence to support a recommendation against use; should never be offered

#### CLINICAL ALGORITHM(S)

None provided

### EVIDENCE SUPPORTING THE RECOMMENDATIONS

#### TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for most recommendations (see "Major Recommendations").

### BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

#### POTENTIAL BENEFITS

Appropriate diagnosis and treatment of asymptomatic bacteriuria in adults

#### POTENTIAL HARMS

Not stated

### QUALIFYING STATEMENTS

#### QUALIFYING STATEMENTS

This guideline is not meant to replace clinical judgment.

### IMPLEMENTATION OF THE GUIDELINE

#### DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

### INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

#### IOM CARE NEED

Getting Better

#### IOM DOMAIN

Effectiveness

## IDENTIFYING INFORMATION AND AVAILABILITY

### BIBLIOGRAPHIC SOURCE(S)

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### ADAPTATION

Not applicable: The guideline was not adapted from another source.

### DATE RELEASED

2005 Mar 1

### GUIDELINE DEVELOPER(S)

Infectious Diseases Society of America - Medical Specialty Society

### SOURCE(S) OF FUNDING

Infectious Diseases Society of America (IDSA)

### GUIDELINE COMMITTEE

Infectious Diseases Society of America (IDSA) Practice Guidelines Committee

### COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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### FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Potential conflicts of interest. L.E.N. has received research funding from Ortho-McNeil. R.C. has received research funding from Ortho-McNeil and has served on the speakers' bureau for Bayer. A.S. has been a consultant for Ortho-McNeil, Proctor & Gamble, Gerson Lehrman Group, Urologix, DepoMed, Schwarz BioSciences GmbH, and SynerMed Communications. T.M.H. has been a consultant for Bayer and served on the speakers' bureau for Aventis, Bayer, Merck, and Pfizer.

### GUIDELINE STATUS

This is the current release of the guideline.



## GUIDELINE AVAILABILITY

Electronic copies: Available from the Infectious Disease Society of America (IDSA) Web site:

- [HTML Format](#)
- [Portable Document Format \(PDF\)](#)
- [Postscript](#)

Print copies: Available from Infectious Diseases Society of America, 66 Canal Center Plaza, Suite 600, Alexandria, VA 22314.

## AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Kish MA. Guide to development of practice guidelines. Clin Infect Dis 2001 Mar 15;32(6):851-4.

Electronic copies: Available from the Infectious Diseases Society of America (IDSA) Web site in [HTML Format](#) and [Portable Document Format \(PDF\)](#).

Print copies: Available from Infectious Diseases Society of America, 66 Canal Center Plaza, Suite 600, Alexandria, VA 22314.

## PATIENT RESOURCES

None available

## NGC STATUS

This summary was completed by ECRI on April 6, 2005.

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